

## **Appendix A**

### **Typical Budget Items for a Campaign**

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Here are some typical items to consider when developing a campaign budget. Costs should be estimated for each item that applies. Some labor and materials may be donated by base organizations, utilities, energy coalitions, and schools, thus reducing costs.

## **Labor**

- ◆ Obtaining base approvals, identifying necessary resources, and designing the campaign
- ◆ Conducting focus groups
- ◆ Conducting surveys
- ◆ Researching, writing, designing, and printing information materials
- ◆ Creating art, including a logo, cartoons, etc.
- ◆ Shooting, narrating, and editing a video
- ◆ Working with media representatives to encourage coverage
- ◆ Working with residents and base leaders to develop, carry out, and evaluate the campaign
- ◆ Preparing educational materials for kids
- ◆ Gathering and analyzing energy-use data
- ◆ Preparing and conducting events such as energy fairs
- ◆ Distributing materials around base
- ◆ Answering resident questions
- ◆ Preparing a summary report for base officials/sponsors

## **Materials**

- ◆ Postage for mailing surveys and/or information materials to residents
- ◆ Postage for mailing draft materials back and forth to team members, if not all reside on base
- ◆ Paper for printed materials, including poster paper
- ◆ Computer programs, disks, and color printers
- ◆ Videotape cartridges
- ◆ Display materials for special events
- ◆ "Giveaways" or prizes such as refrigerator magnets, T-shirts, coffee mugs, coloring books

## **Direct Costs**

- ◆ Incentives for residents
- ◆ Travel costs, if some team members do not reside on base
- ◆ Food, beverages for focus groups and meetings.

## **Appendix B**

### **Examples of Printed Information Materials**

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(press release introducing campaign)

## **FOR IMMEDIATE RELEASE**

Today we kick off the MCAS Yuma "You Have the Power" campaign to use energy and water efficiently in base housing. You will be asked to complete a survey about how you use energy and water. You will see information and reminders on the electronic bulletin boards, in the "Cactus Comment" and the newsletter. Your children may be involved in energy-saving projects.

We hope to decrease energy use – focusing on our electricity-guzzling air conditioners – and water use. Together, we can improve the environment, cut our energy and water bills, and become recognized as a Marine Corps leader in the efficient use of energy and water.



## Smart Energy Choices

### Operation Energy Tips for Families Living on Post at Fort Lewis

**Use heat wisely.** Managing your thermostat is the most important thing you can do to use energy wisely! Keep the thermostat at 70 degrees or lower. Turn down the thermostat at night to 65 degrees or lower when you go to bed or leave your house for more than four hours. Keep doors and windows closed when the heat is on. Close drapes and blinds in the evening and at night. Minimize the use of portable heaters. Keep air outlets and radiators clean. **Don't "draft" your family.** You will feel more comfortable if you keep drafty air from seeping into your home. Check for air leakage around doors and windows. If cold air is seeping in, contact your Family Housing Work Order Desk. **Get a bright idea.** Use lights only when you need them. Turn lights off in unoccupied areas, including porch lights when you go to bed. Buy light bulbs that are 60 watts or less. Even better, get energy-saving compact fluorescent lights – they last much longer and you won't have to change them as often! **Wash wisely.** Heating water takes a lot of energy. Make sure the dishwasher and clotheswasher have full loads before running them. Use the "air dry" setting on the dishwasher. Wash clothes in cold water when possible, and rinse them in cold water. **Keep your cool.** Hot air can be hard on clothing. Use the air dry setting on the dryer when possible. This will help reduce shrinkage and make clothes last longer. To keep your dryer from working too hard and overheating, clean the lint filter after every load. And keep the outside exhaust vent clean. **Take charge of your fridge.** Set your refrigerator temperature at 37 to 40 degrees and your freezer at 0 to 5 degrees. Close the door quickly after you select an item.

Breathe easier. Filters that are clean help keep dust out of the air. Change or clean filters monthly. Get new filters from the Self-Help Store.



For more information about wise energy use,  
contact Public Works at 967-2837.

Hi, neighbor! I thought you weren't home — your curtains are drawn

No, no, I'm here — just keeping the house cooler and protecting my furniture from the sun.

Good idea. I've been keeping my thermostat at 80, and we're a lot more comfortable — no more feeling chilly when I walk in the house.

And when it's humid, I keep the fan on low. I get better cooling and the equipment gets more moisture out of the air.

Sometimes I use a portable fan in the kitchen so I don't need to turn up the AC for the whole house when I'm cooking or cleaning.

I'm glad I don't have to pay my own electricity bill, but I still feel I ought to watch my energy use.

Me, too. Nice to see you!

These tips on being comfortable and energy efficient are brought to you by your Housing Office and by your Energy Manager.

Oh, no! He left his sprinkler on all day again?

The sad thing is, it doesn't even help his lawn.

Short watering times let the grass absorb water in the root zone better. Those puddles just mean evaporation and runoff.

And I keep my grass longer in hot weather – about 4 inches – so the grass itself shades the roots and soil.

Yes, he did. This part of the street got flooded again, and I got my feet wet getting into my car.

You're so right. In the morning and/or the evening, 30 minutes max. That's the best.

I got one of those timers to put on my sprinkler. I just turn on the water, set the timer, and walk away.

I wonder how we could get the message across to him. Maybe an article in the *Cactus Comment*?

These tips on efficient watering are brought to you by your Housing Office and by your Energy Manager.

# Operation Energy

The push is on to curb energy use in post housing

BY ALIC CLAYTON

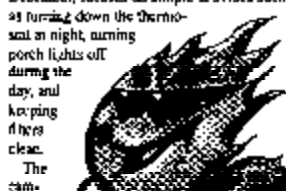
**F**ort Lewis and all military installations must reduce energy consumption by 30 percent, based on 1985 levels, by the year 2000. Energy use on post costs about \$12 million a year according to Charles Howell from Public Works. "We have been doing different kinds of energy programs and have increased our target to a 35 percent savings," Howell says. "We've been concentrating on the troop side, getting soldiers to limit their energy use in the barracks, and now we want to focus on housing."

In one year, energy conservation programs in the barracks and administrative buildings have saved Fort Lewis \$200,000, says Andrea McMakin of PNW National Lab, a contractor working with Fort Lewis and the Department of Energy.

Similar savings in housing may be a much larger challenge. Housing accounts for around 25 percent of all energy consumption on post, or around \$3 million in a year. On the job, a commander can mandate turning off the lights when you leave -- not so at home. "When you're not paying the bill, you don't see the bill. But Fort Lewis pays for it," McMakin says. "Relying on residents to make behavioral changes is a particular challenge, because family housing residents don't currently pay their own utility bills and thus lack the incentive of lower utility bills."

To meet this challenge, Fort Lewis is conducting a new campaign called Operation Energy. The objective is to increase energy efficiency in on-post family housing through activities family members can do themselves. McMakin says this is the only campaign they have found nationwide that focuses on energy efficiency in Army family

housing, using no cost or low cost activities family members can do themselves (as opposed to upgrades and technology). Operation Energy, which begins in September and is expected to run through December, focuses on simple activities such as turning down the thermostat at night, turning porch lights off during the day, and keeping doors closed.



The campaign is jointly supported by the U.S. Department of Energy's Federal Energy Management Program. DOE is interested in the results and wants to make this campaign a model for other military bases. Results from the campaign, along with support materials including a locally produced video, are expected to be used by DOE nationwide.

To help meet this challenge, Fort Lewis has taken the unusual and innovative approach of offering incentives to families who conserve energy based on the amount of money saved each month. Howell promises there will be things like block parties and prizes for communities that reduce energy use.

McMakin says other groups want to get involved. "Scouting leaders," she says, "have expressed a high degree of interest in folding energy efficiency activities into their programs. We've talked about having them create art that would be used in the campaign. They also may go door-to-door handing out fliers or other information, and may be asking people what they do to conserve energy." She also expressed the hope that

community members would get into the act.

Operation Energy has created a video called "In Search of the Energy Bandit" which will be aired in October. National Energy Awareness Month. The video features a cartoon character, the energy bandit. "He's a sneaky bad guy who runs around sucking up energy, creating drafts and creating havoc in people's homes. We tell people how to capture him by doing things around the house to use energy efficiently," McMakin says. ■

## Energy saving tips

■ **Use heat wisely:** Keep the thermostat at 70 or lower; turn it down to 65 or lower when you go to bed or leave the house for more than four hours. Keep doors and windows closed when the heat is on. Close doors or blinds in the evening. Do not use electric heaters; they are a fire hazard. Arrange furniture and draperies away from registers so air can circulate. Keep outlets and radiators clean.

■ **Breathe easier:** Change or clean filters monthly. Get new filters from the Self-Help Store.

■ **Don't "draft" your family:** Check for air leaks around doors and windows. If cold air is seeping in, contact your Family Housing Work Order Desk.

■ **Get a bright idea:** Use battery-powered night lights. Turn out porch lights when you go to bed. Use 60-watt or less bulbs or long-lasting, energy-saving compact fluorescent lights.

■ **Wash wisely:** Make sure the dishwasher and clotheswasher have full loads before running them. Use the "air dry" setting on the dishwasher. Wash clothes in warm or cool water when possible and rinse in cool water.

■ **Keep your cool:** Use the air dry setting on your dryer when possible to help reduce shrinkage and make clothes last longer. Clean the filter after every load and keep the outside exhaust clean.

■ **Take charge of your "fridge":** Set the temperature at 35 to 40 degrees and the freezer at 0 to 5 degrees. Close the refrigerator door as quickly as you can. ■

# Lewis

**MONEY PROBLEMS? WE CAN HELP IMMEDIATELY**

- Consolidate Bills
- No Phone Calls from Creditors
- No Credit Checks
- Immediate Relief On All Unsecured Debt and High Interest Credit Cards

**FOR INTERVIEW/APPOINTMENT**

**BBB CALL : 581-0135**

NON-PROFIT, NON-LENDING ORGANIZATION

**WASHINGTON USED TIRE & WHEEL BUY-SELL-TRADE**

**WHEN YOU "RETIRE" SEE US!!**

**OPEN SUNDAYS at Canyon Rd. E.**

**GOOD USED TIRES AND WHEELS CREDIT CARDS ACCEPTED**

6831 So. Tacoma Way 471-0275  
11325 Canyon Rd. E. 536-1196

**CASH 'TIL PAYDAY LOANS**

**UP TO \$500**

**Basic Qualifications Include**

**Personal Checking Account**

Steady Source of Income

# strokes & plugs

## One gun, two gun

**FORT LEWIS** - The 1st Personnel Group will host a training session on conducting Personnel Asset Inventories from 9 a.m. to noon Sept. 2 in Room 101 at the 500g Education Center. For more details, call 967-8391.

## One dollar, two dollar

**FORT LEWIS** - A Personnel Financial Readiness Counselor Training Course for active duty personnel interested in serving as financial counselors will be available from 9 a.m. to 5 p.m. daily from Sept. 21-25 at Army Community Services inside Walker Hall. For more information, call Dr. Gloria Winick at 967-3555.

## Custer's new stand

**FORT LEWIS** - Lt. Col. John M. Custer III will grab the helm of the 201st Military Intelligence Brigade from Col. John W. Hall during a change of command ceremony at 13 a.m. Sept. 1 at Walker Hall. Lt. Col. Custer, head for Jensen Gym. A reception will follow at the Fort Lewis Officers Club.

## Evacuation evacuates

**FORT LEWIS** - The 65th Medical Evacuation Battalion, AHC 65th Med Evac Bn and 73rd Med Det (VET) will depart at 10 a.m. Sept. 3 at Walker Field. Lt. Col. Betty J. Wiley, 62nd Med Group Commander, will be arriving in command of the battalion colors.

## 50th reunion

**McCHORD AFB** - The 25th Air Division 50th Anniversary Reunion is scheduled October 23-26 at McChord. Call 934-4715 for more information.

## USO volunteers needed

**SEATTLE** - Volunteers are needed at the USO centers at Bataan and McChord Air Force Base. Be a part of a team of 62,000 expressing the appreciation of a grateful nation to its sons and daughters who face harm daily so we may all live in peace. Training and parking are provided. Call 246-1909 (SEA Tac) or 589-8772 (McChord). ■



## The Operation Energy Campaign

*Family housing at Ft. Lewis accounts for about 25% of all the energy used on Post. In 1998, Operation Energy was launched at Fort Lewis to help family housing communities use electricity and gas energy more efficiently.*

*Federal Legislation requires the federal government—including military bases—to reduce energy consumption by 30% from 1985 levels. FORSCOM has increased that reduction goal to 35% for all Forces Command installations.*

*Fort Lewis saved \$200,000 in energy costs in one year in barracks and work areas. Now, the focus has expanded to residential communities.*

*Public Works is tracking energy use by housing community. Each community will receive an incentive based on how much energy it has saved from the previous year's use.*

Operation Energy is supported in part by Fort Lewis and by the U.S. Department of Energy's Federal Energy Management Program.

YOU HAVE  
the POWER



**For more information  
about wise energy use,  
contact Public Works at  
967-2837.**

For more information, call  
Public Works at 967-2837 or  
visit the website at [www.fortlewis.com](http://www.fortlewis.com)  
or [www.operationenergy.com](http://www.operationenergy.com)



**Smart  
Energy  
Choices**

# Operation Energy

## Tips for Families Living on Post at Fort Lewis

**Use heat wisely.** Managing your thermostat is the most important thing you can do to use energy wisely! Keep the thermostat at 70 degrees or lower. Turn down the thermostat at night to 65 degrees or lower when you go to bed or leave your house for more than four hours. ♦ Keep doors and windows closed when the heat is on. ♦ Close drapes and blinds in the evening and at night. ♦ Minimize the use of portable heaters. ♦ Keep air outlets and radiators clean.

**Breathe easier.** Filters that are clean help keep dust out of the

air. Change or clean filters monthly. Get new filters from the Self-Help Store.

### Don't "draft" your family.

You will feel more comfortable if you keep drafty air from seeping into your home. Check for air leakage around doors and windows. If cold air is seeping in, contact your Family Housing Work Order Desk.

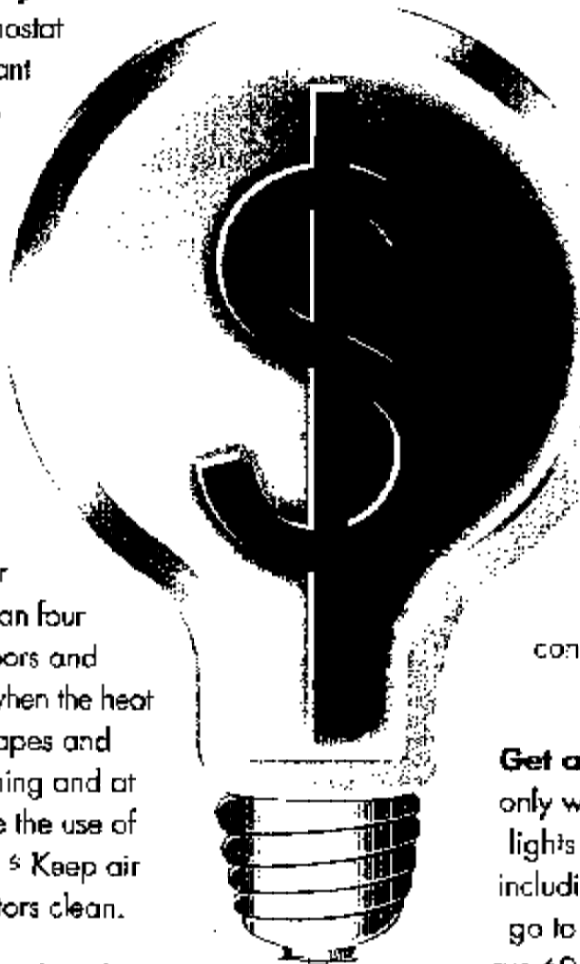
**Get a bright idea.** Use lights only when you need them. Turn lights off in unoccupied areas, including porch lights when you go to bed. Buy light bulbs that are 60 watts or less. Even better, get energy-saving compact

fluorescent lights – they last much longer and you won't have to change them as often!

**Wash wisely.** Heating water takes a lot of energy. Make sure the dishwasher and clotheswasher have full loads before running them. Use the "air dry" setting on the dishwasher. Wash clothes in cold water when possible, and rinse them in cold water.

**Keep your cool.** Hot air can be hard on clothing. Use the "air dry" setting on the dryer when possible. This will help reduce shrinkage and make clothes last longer. To keep your dryer from working too hard and overheating, clean the lint filter after every load. And keep the outside exhaust vent clean.

**Take charge of your fridge.** Set your refrigerator temperature at 37 to 40 degrees and your freezer at 0 to 5 degrees. Close the door quickly after you select an item.



## OPERATION ENERGY

by Andrea McMakin



As part of a new "Operation Energy" campaign, Family Housing members can look forward to receiving an incentive for using energy wisely. The campaign, which begins this month, highlights simple ways family members can use energy efficiently in on-post housing.

Operation Energy builds on our success with barracks and troop administrative areas, where we saved about \$200,000 in energy costs in fiscal year 1997. For Family Housing, each neighborhood will receive an incentive equivalent to how much energy the community saved each month, compared with last year's energy consumption.

Housing residents in several communities were consulted for ideas to develop the campaign. Residents chose the campaign logo (light bulb containing a dollar sign) and slogan ("Smart Energy Use"). Residents also provided a valuable "reality check" on an initial set of energy-saving actions and contributed ideas for involving people and communicating results. Scout leaders are planning ways to involve scouts in Operation Energy as a way to earn merit badges and meet community service requirements. This month, the video "In Search of the Energy Bandit" will begin running on Channel 2. Residents from five neighborhoods - Beachwood, Broadmoor, Davis Hill, Evergreen, and Greenwood - are featured in the video. Beginning in October, Public Works will report how much money each community has saved in energy use. Residents are also invited to give energy tip, which will be published each month.

The campaign is supported in part by the US Department of Energy's Federal Energy Management Program and may become a model for other military

installations. For more information about Operation Energy or to contribute an energy tip, contact Charles Howell at Public Works at 967-2837. (8743)

### Energy Tips for Families Living on Post at Fort Lewis:

- ☆ Turn your thermostat down to 65 degrees when you go to bed or leave your house for more than four hours.
- ☆ Keep doors and windows closed when the heat is on.
- ☆ Change or clean furnace filters monthly. Get new filters at the Self Help Store.
- ☆ If cool air is seeping in through old weather stripping or caulking around doors and windows, contact the Work Order Desk at 964-8844.
- ☆ When you need a new light bulb, check the Commissary and PX for compact fluorescent lights, which last ten times longer than regular light bulbs.
- ☆ Turn off all outside lights during daylight hours.
- ☆ Run full loads in your dishwasher and clothes washer.
- ☆ Use the "air dry" and "energy saver" features on the dishwasher.
- ☆ Use cold water for rinsing clothes, and use the "air dry" setting on the dryer.
- ☆ Clean the lint trap on the dryer before every load.
- ☆ Set your refrigerator temperature at 37 to 40 degrees and your freezer at 0 to 5 degrees. Close the door quickly after you have selected your food item.

### TOWING ABANDONED AND DISABLED VEHICLES

by MSG John Jackson

The Housing Area Managers have been given the authorization to have abandoned and disabled vehicles towed. The abandoned or disabled vehicle will be marked first. The registered owner will then have nine days to either register the vehicle if it lacks a registration, or remove it from the housing area if it is disabled. If action is not taken within the nine-day period, the vehicle will be towed at the registered owner's expense.

## FAMILY HOUSING TO GET \$\$\$ BACK FOR SMART ENERGY USE

by Laura Morasch and Charles Howell



Since September, four family housing areas have saved big bucks by making smart energy choices. In the five months since September 1998, here is what residents have saved, as compared with last year's use: Beachwood (\$14,895), Davis Hill (\$18,728), Greenwood (\$433), and Madigan (\$1,512).

Some of these savings are very impressive! And even better, each community will get part of its energy savings back in a block party or other community event when the Operation Energy campaign ends this fall. The more energy dollars each housing area saves, the more its residents get back.

If your housing area shows no savings yet, there is still time to earn money back for your community. Savings can change dramatically from month to month by hundreds and even thousands of dollars. The Public Works Energy Management Office is monitoring energy use monthly. The best way to save consistently is for family members to make smart energy choices every day (see tips below).

Learn more about Operation Energy on Channel 2, where you will see your friends and neighbors in action against the dreadful Energy Bandit! Residents also learned about the campaign at the Kids Fest in April, on reader boards, at community forums, monthly mayor's meetings, and in fliers and posters around the installation. For more information, contact your mayor or the Public Works Energy Management Office at 967-2837.

## How to Save Energy Dollars in Family Housing *How many of these things do YOU do?*

**Indoor Temperature and Comfort.** Turn thermostat down to 65 degrees when going to bed or leaving the house for more than four hours. Keep doors and windows closed when heat is on. Change or clean furnace filters monthly (get new filters at the Self-Help Store). Call the Work Order Desk at 964-8844 to repair weather stripping, caulking, or broken thermostats.

**Lights.** Buy compact fluorescent lights at the Commissary and PX. They use one quarter the energy of regular bulbs and last ten times longer. Turn off inside lights when not in use. Turn off all outside lights during daylight hours.

**Kitchen.** Wait until you have a full load to run your dishwasher. Use "air dry" and "energy saver" settings on the dishwasher. Set your refrigerator's temperature at 37 to 40 degrees and your freezer at 0 to 5 degrees. Close the door quickly, and make sure the door is closed tightly.

**Washer and Dryer.** Run full loads. Use cold water for rinsing clothes. Use the "air dry" setting on the dryer. Clean the lint trap before loading the dryer.

## NEWS FROM YOUR VET

Do you have pets *going to Hawaii*? Owners are advised to contact the Veterinary Services at 967-3988 at least seven months prior to departure for new State of Hawaii importation regulations for pets. Pet vaccinations and health certificates are required for interstate and international travel. A copy of orders is required for health certificates.

Stray pets found on Fort Lewis and McChord AFB are held for three working days at the Stray Animal Holding Facility located at the Veterinary Treatment Facility (Building 9988 at Old Madigan). If not claimed, pets are put up for adoption or euthanized.

## How are you saving energy today?



Oh, no! He left his sprinkler on all day again?

Yes, he did. This part of the street got flooded again, and I got my feet wet getting into my car.



The sad thing is, it doesn't even help his lawn.

You're so right. In the morning and/or evening, 30 minutes max. That's the best.



Short watering times let the grass absorb water in the root zone better. Those puddles just mean evaporation and runoff.

I got one of those timers to put on my sprinkler. I just turn on the water, set the timer, and walk away.

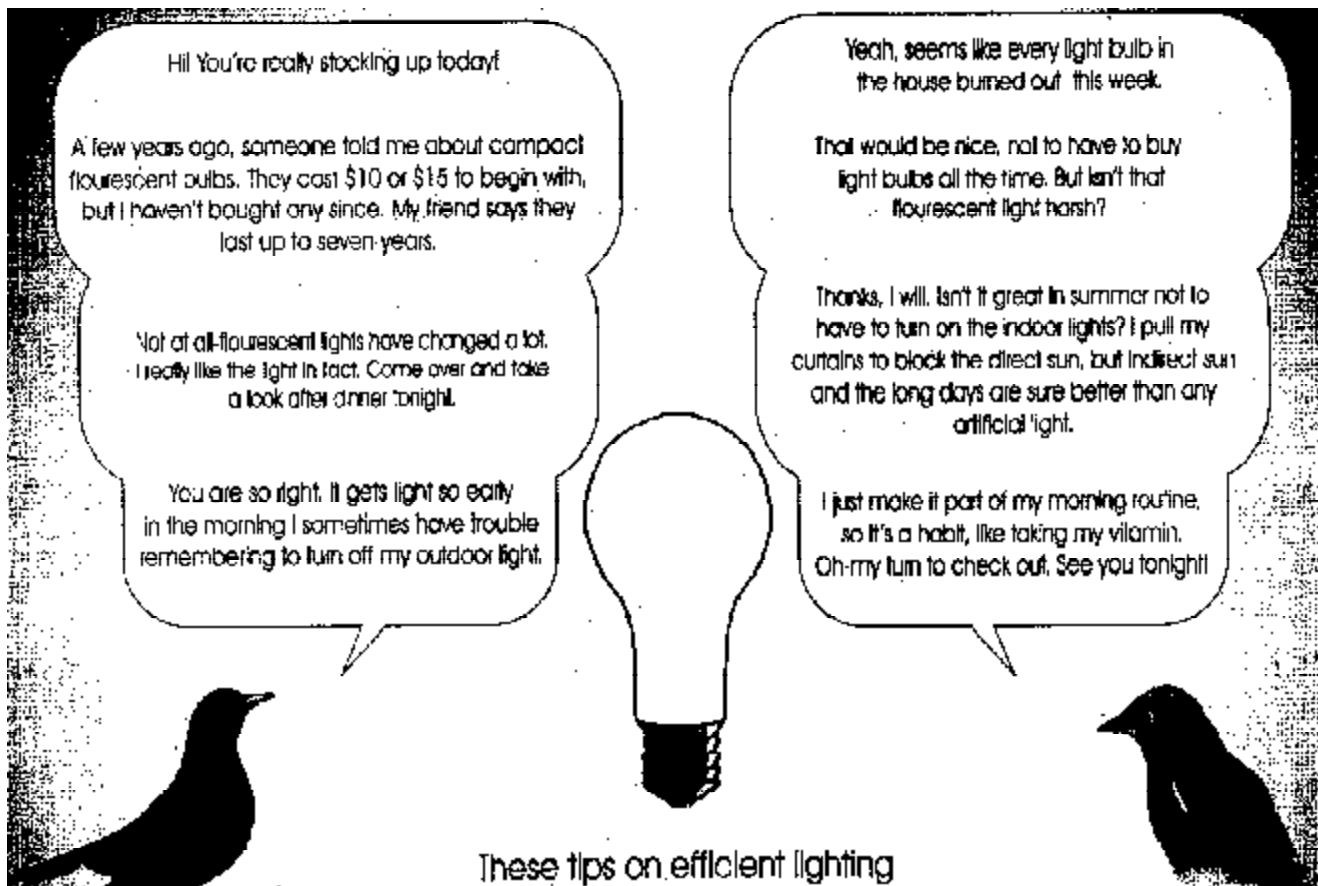


And I keep my grass longer in hot weather-about 2 to 3 inches-so the grass itself shades the roots and soil.

I wonder how we could get the message across to him. Maybe an article in the Cactus Comet?



These tips on efficient watering are brought to you by your Housing Office and by your Energy Manager.





**"WANTED"**  
**"ENERGY BANDIT"**

*A sneaky little fellow who steals your  
dollars and your comfort.*

*Be a good energy user.*

**Station Energy Monitor 341-5255**

**Station Housing Office 341-2825**

**Military Chain of Command**

Copyright (c) 1996 Maxsoft Inc.

We know you have a lot to say.  
So say it.



If you live in Family Housing at Fort Lewis,  
you may have heard about OPERATION ENERGY.  
Since last fall, we've been telling residents how they can  
use energy wisely in their homes ...  
while staying comfortable ...  
and getting an incentive award for their communities.

Now, we want to hear from you.

Did it work?  
Are people doing anything differently?  
What really motivates people to use energy wisely?  
What should we do next?

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You talk. We listen. Free refreshments.

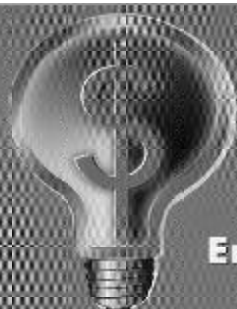


Not a bad way to spend an hour.

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Family Housing Residents Invited  
Friday, August 13, 1999  
7:00 - 8:00 p.m.  
Family Resource Center





# Operation Energy

Energy Savings in Ace Army Base Housing

September 1998 — June 1999

Campaign Ends August 1999

Each housing area will receive a portion of its \$ saved!

## Area 1

Total \$21,825 Fall \$4,088 • Winter \$5,807 • Spring \$65 • June \$6,885

## Area 2

Total \$0 Fall \$2,458 • Winter -\$4,116  
Spring -\$309 • June \$475

## Area 3

Total \$0 Fall \$1,541 • Winter -\$3,496  
Spring -\$1,823 • June \$276

## Area 4

Total \$27,460 Fall \$12,709 • Winter \$6,519 • Spring \$3,227 • June \$5,405

## Area 5

Total \$0 Fall \$890 • Winter -\$494  
Spring -\$185 • June -\$29

## Area 6

Total \$12,111 Fall -\$300 • Winter -\$615 • Spring \$11,171 • June \$6,855

## Area 7

Total \$0 Fall \$3,601 • Winter -\$3,168  
Spring -\$2,848 • June \$458

## Area 8

Total \$1,961 Fall \$9,397 • Winter -\$11,707  
Spring \$889 June \$3,432

## Area 9

Total \$2,318 Fall -\$93 • Winter \$1,552  
Spring \$1,085 • June \$219

## Area 10

Total \$390 Fall -\$1,632 • Winter \$1,007 • Spring \$-126 • June \$1,241

Total Savings  
\$63,849  
To Date

\$0 \$3,000 \$6,000 \$9,000 \$12,000 \$15,000 \$18,000 \$21,000 \$24,000 \$27,000 \$30,000 \$33,000 \$36,000

Total Energy Dollars Saved From Last Year

For more information about Operation Energy,  
contact Public Works

YOU HAVE  
the POWER.



## **Appendix C**

### **Survey Examples**

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(baseline survey)

## **MCAS Yuma Home Energy Survey**

Sponsored by the Federal Energy Management Program

This survey is one of the first activities in the 1999 campaign to improve energy efficiency in family housing at MCAS Yuma. YOU, the energy user, are the most important element in this campaign. This survey will provide baseline data by which we can identify where information or other assistance is needed.

**Do you use any of the following appliances in your residence?**

	<u>No</u>	<u>Yes</u>
Space heater	•	• .....If yes, how many? _____
Electric fans	•	• .....If yes, how many? _____
Air conditioners	•	•
Dishwasher	•	•
Computer	•	•
Clothes washer and dryer	•	•

**HOME ENERGY IMPROVEMENTS:** Have you done any of the following energy improvements in your house?

	<u>Yes</u>	<u>No</u>	<u>Don't know</u>
Installed energy-efficient light bulbs (such as compact fluorescent tubes)	•	•	•
Set hot water at 110°F or less	•	•	•
Installed flow restrictors on shower heads	•	•	•
Installed flow restrictors on faucets	•	•	•

### **AIR CONDITIONING:**

**Do you regularly practice any of the following?**

	<u>Yes</u>	<u>No</u>
Keep indoor temperature at 80°F or higher when at home	•	•
Close windows and doors when air conditioner is on	•	•
Use fans to supplement air conditioning	•	•
Clean air conditioner filters at least once a month during the air conditioning season	•	•

**Do you:**

	<u>Yes</u>	<u>No</u>
Use the air conditioning primarily during the day hours	•	•
Use the air conditioning primarily at night for sleeping	•	•
Use the air conditioning all day during hot weather	•	•

**LIGHTING: Do you regularly practice any of the following?**

	<u>Yes</u>	<u>No</u>
Turn off outdoor lights during the day	•	•
Turn off lights in unoccupied rooms	•	•
Rely on daylight hours instead of turning on lights	•	•

**WATER USE: Do you regularly practice any of the following?**

	<u>Yes</u>	<u>No</u>
Wash most or all of the laundry in cold water	•	•
Run only full loads in the clothes washer	•	•
Run only full loads in the dishwasher	•	•
Water the garden/yard in the evening or early morning rather than during mid day	•	•

**REFRIGERATOR/FREEZER: Do you regularly do the following?**

	<u>Yes</u>	<u>No</u>
Set refrigeration temperature at 40°F or higher	•	•
Defrost the refrigerator at least twice a year	•	•
Use a personal refrigerator in addition to the one furnished by the government	•	•

**RECYCLING: Do you recycle any of the following items?**

	<u>Yes</u>	<u>No</u>
Newspaper	•	•
Cardboard and wood	•	•
All other paper	•	•
Glass	•	•
Aluminum cans	•	•
Plastic	•	•
Yard/garden waste	•	•
Other: _____	•	•

**TRANSPORTATION: Do you**

	<u>Yes</u>	<u>No</u>
Bicycle or walk to work?	•	•

**BACKGROUND INFORMATION**

	<u>Yes</u>	<u>No</u>
Number of adults in your household: _____		
Number of children in the household: _____		
Is anyone regularly home during the day?	•	•

**Thank you for your participation!**

Please feel free to call me if you have any questions or concerns.

Pat Queen  
Assistant Housing Manager  
MCAS Yuma

**Please return this survey to the Housing Office between 0700 and 1600 Monday through Friday or tape it to your front door on 19 July and it will be collected during the day. Thanks!**

(final evaluation)

**Energy Efficiency in Fort Lewis Family Housing**

**1. Have you heard about the Operation Energy campaign to use energy more efficiently in post family housing?**

☐ Yes      ☐ No (If no, go to Question #7)      ☐ Not sure

**2. How did you become aware of the Operation Energy campaign? Check all that apply.**

<input type="checkbox"/> My mayor or other mayors	<input type="checkbox"/> Family members, including children
<input type="checkbox"/> Video on Channel 2, "In Search of the Energy Bandit"	<input type="checkbox"/> Friends or neighbors
<input type="checkbox"/> Flier or brochure	<input type="checkbox"/> Poster
<input type="checkbox"/> Guardian newspaper	<input type="checkbox"/> Display at Kids' Fair or Armed Services day
<input type="checkbox"/> Newsletter article from "Under Our Roof" (published by Housing)	<input type="checkbox"/> Reader board
<input type="checkbox"/> Other	<input type="checkbox"/> Not sure
	<input type="checkbox"/> My community's newsletter

**3. Have you heard that each housing community that saves energy will receive an incentive award?**

☐ Yes      ☐ No

**4. Which community is saving the most energy so far? (Choose one)**

<input type="checkbox"/> Beachwood/Lakewood	<input type="checkbox"/> Broadmoor	<input type="checkbox"/> Clarkdale
<input type="checkbox"/> Davis Hill	<input type="checkbox"/> Eagle View	<input type="checkbox"/> Evergreen
<input type="checkbox"/> Greenwood	<input type="checkbox"/> Old/New Hillside	<input type="checkbox"/> Madigan
<input type="checkbox"/> Parkway	<input type="checkbox"/> Don't know	

**5. Here are some things we asked residents to do in Operation Energy. Please check the things that you started doing AFTER Operation Energy began in September 1998.**

☐ No change

**Heating and Cooling**

☐ Began turning the thermostat down at night before going to bed (or turned it down lower than before)

☐ Began turning the thermostat down when leaving the house for 4 hours or more (or turned it down lower than before)

☐ Asked All Star to repair broken thermostat

☐ Asked All Star to repair caulking or other weatherization materials

☐ Began closing windows and doors when heat was on (or closed them more often than before)

☐ Cleaned or changed furnace filter for the first time (or more often than before)

☐ Reduced or eliminated use of a space heater

### **Lighting**

- ☐ Began purchasing new light bulbs at 60 watts or less
- ☐ Replaced a standard (incandescent) light bulb with a compact fluorescent light bulb
- ☐ Started turning off outside lights in the daytime (or turned them off more often than before)

### **Washing and Drying**

- ☐ Began using cold water for washing clothes (or used it more often)
- ☐ Began using the low or cool setting on dryer when possible (or used it more often)
- ☐ Began running full loads of clothes in washer and dryer
- ☐ Began cleaning the lint trap in the dryer (or cleaned it more often)
- ☐ Began running full loads in the dishwasher (or ran them more often)
- ☐ Began using the air dry setting on the dishwasher (or used it more often)

### **Refrigerator and Freezer**

- ☐ Adjusted the refrigerator temperatures to be 37-40 degrees or the freezer temperature to be 0-5 degrees

### **6. What caused you to start doing those things? Check any that apply.**

- ☐ I wanted my housing community to get money back
- ☐ All the housing communities on post were being compared, and I wanted my community to excel
- ☐ I wanted more comfortable temperature conditions in my home
- ☐ I was reminded whenever I saw or heard something about Operation Energy
- ☐ My family, friends, or neighbors were talking about it
- ☐ The video (TV) demonstrated how to do things
- ☐ It's the right thing to do
- ☐ I want to set a good example for my kids
- ☐ Other: \_\_\_\_\_

### **7. Is there anything that made it impractical or difficult for you to save energy? Check any that apply.**

- ☐ My house wastes energy because of the way it is constructed, or because of its age
- ☐ I have asked to have things repaired that could save energy, but it hasn't happened
- ☐ The Army does not allow us to do some things that will make the house more energy-efficient
- ☐ We don't have a cool or air dry setting on our washer/dishwasher/dryer
- ☐ The kids leave the doors and windows open
- ☐ I'm too busy to think about it; other things are more important
- ☐ As long as I'm not paying for it, it's not a priority for me
- ☐ I won't be stationed here long enough to make a difference
- ☐ Other: \_\_\_\_\_

**8. Which housing community do you belong to? (Choose one)**

<input type="checkbox"/> Beachwood/Lakewood	<input type="checkbox"/> Broadmoor	<input type="checkbox"/> Clarkdale
<input type="checkbox"/> Davis Hill	<input type="checkbox"/> Eagle View	<input type="checkbox"/> Evergreen
<input type="checkbox"/> Greenwood	<input type="checkbox"/> Old/New Hillside	<input type="checkbox"/> Madigan
<input type="checkbox"/> Parkway		

**9. How long have you lived there?**

☐ 3 months or less    ☐ 4-6 months    ☐ 7 months to 1 year    ☐ More than a year

**10. In your opinion, what will it take to motivate residents to keep using energy wisely?**

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**THANK YOU!**

Please return this survey in the enclosed, postage-paid envelope by \_\_\_\_\_.



## Appendix D

### Example Video Script

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# "In Search of the Energy Bandit"

Training Videotape Used with the Operation Energy Campaign  
for Fort Lewis Family Housing  
1998

Video	Audio/Graphic Effects	Narration
Camera searching along window frames, seen through circle like telescope	Character music	
Title: "In Search of the Energy Bandit"	Character music fades out	
Mom and son walking up sidewalk to house, reaching front door, and if time, opening it (show flag on house).	Happy, relaxed music	At Fort Lewis, our homes are safe and comfortable ...
Family doing puzzle on table	Happy music continues	... A place to relax and have fun with our families. Our homes are so important to us that we guard against anyone breaking in to steal our possessions.
Energy bandit creeping	"Sneaky" character music	But there is one unsavory character lurking around inside our homes, most of the time ... the ENERGY BANDIT.
Energy bandit "vacuuming" energy	Character music continues, then fades.	The Energy Bandit runs around stealing energy, creating drafts, and generally wreaking havoc, when it comes to energy efficiency. But you can outsmart the energy bandit - home by home.
Playground with house in background. Housing names superimposed on scene: Broadmoor Beachwood Eagle View Greenwood Parkway Davis Hill New Hillside Old Hillside Clarkdale Evergreen Madigan	Background (energetic) music	Family housing at Fort Lewis costs about \$3 million dollars annually for electricity and gas energy. So, by using energy wisely, you and your family can make a BIG difference.
Mom turning down knob in freezer (show hand on knob close-up only)		YOU are the best weapon against the Energy Bandit. It's easy ... and you won't have to sacrifice comfort.

Video	Audio/Graphic Effects	Narration
Dad and mom changing lightbulb [very quick clip, maybe taking the old bulb out]		By making smart energy choices around the house, you can reduce the amount of energy that the Bandit is getting away with.
Energy Bandit moving across screen, holding sign saying "Temperature"	New music	
Setting back the thermostat	Energetic music.	<p>One of the most important things you can do is to control the temperature in your home. If you do only one thing to save energy, this should be the one.</p> <p>Keep the thermostat at 70 degrees or lower to heat your home during the day. Turn it down to 65 degrees at night, or if you'll be gone for more than four hours.</p>
Words: 5 degrees less at night = \$500 - \$3,000 saved per month, for a typical housing community		Turning your thermostat down 5 degrees at night saves a substantial amount of energy and money. If everyone in a typical housing area did this, they could save five hundred to three thousand dollars each month in energy costs, for that neighborhood alone!
Mom guiding son inside from patio on Big Wheel, closing sliding glass door.		Your furnace has to work harder if doors are left open. Make sure doors are firmly closed when someone enters or leaves.
Mom shutting heating vent in ceiling.		Close the heating vents in rooms that don't get much use.
Mom, carrying baby, putting heater-in closet.		Minimize the use of portable heaters. They use a lot of energy and can be a fire hazard.
Dad taking out filter and looking at it. Vacuuming it, then hosing it off.		It's important to clean or replace your furnace filter monthly. Not only does this help your furnace run more efficiently, it reduces the amount of dust in the air. Less dust means a healthier home with fewer allergies, and hey, maybe even a little less housework. When your furnace filter wears out, get a new one at the Self-Help Store.

Video	Audio/Graphic Effects	Narration
Words on screen: Family Housing Work Order Desk 964-8844		Report any problems with thermostats or furnaces to the Family Housing Work Order Desk.
Energy Bandit pulling sign that says "Drafts"	New music--Energetic or sneaky	
Mom cranking window shut.		Open windows can cause uncomfortable drafts when it's cool outside. Make sure your windows are closed.
Full shot of camera moving around inside window frame (one without shades).		If you can still feel air leaking in through closed windows and doors, your sealant materials may be worn out.
All Star technician ripping off old weather-stripping, screwing new weather-strip into door frame and squeezing out new caulking in window.		Old weather-stripping can be replaced, and caulking can be reapplied, as the maintenance technician is doing here. This will make your home much more warm and cozy, eliminating those drafty spots. Contact the Family Housing Work Order Desk for this service.
Energy Bandit pulling screen that says "Lighting."	New music	
Mom and son entering house and turning on light in living room. [Try to cut before Mom walks out of scene. We want to imply that she is staying in the room with the light on.]		Using light wisely helps beat the Energy Bandit. Turn lights on only in rooms where you need them.
Dad leaving house to go to work, seeing porch light, turning it off, then coming down front steps.		Of course outdoor lighting is necessary for safety and security, but don't forget to turn off your porch light when you go to bed ... or at least when you get up in the morning.
Mom and Dad changing light bulb and turning on light		You might want to check all the light fixtures in the house - after turning off the lights, of course—to see if the right wattage bulbs are installed. It is unsafe to have a 100-watt bulb in a fixture that is marked for 60 watts.

Video	Audio/Graphic Effects	Narration
Dad, holding son, at Commissary checkout counter buying CFL.		Check the Commissary and PX for energy-efficient compact fluorescent lights. These lights last ten times longer than regular bulbs, so you won't have to change them as often.
Energy Bandit pulling screen that says "Laundry."	New music	
Mom putting clothes in washer, turning knob to cool.		The laundry is a great place to put a lid on the Energy Bandit. Do full loads of laundry. Use cold water for washing whenever possible, and always use cold water in the rinse cycle.
Mom shaking out mesh shirt, putting it in dryer, turning to "air fluff," turning on.		To dry lighter-weight items, use the air-dry setting. If you need to use heat, dry several loads of laundry one after another. It takes a lot of energy to heat up a cold dryer.
Mom pulling out lint screen and cleaning it off.		Clean the lint screen in the dryer between each load. This way, your dryer will not have to work as hard to produce heat.
Mom cleaning exhaust vent.		And keep the outside exhaust vent clean.
Energy Bandit pulling screen that says "Kitchen"	New music	
Mom opening fridge door, turning down temp controls, closing door.		The energy bandit loves to lurk around your kitchen. Check your refrigerator and freezer. They may be too cold. Set your refrigerator at a level that reaches about 37 to 40 degrees. And push the "energy saver" button if you have one.
Mom turning down freezer temperature, closing door.		Set your freezer temperature at mid-level, reaching about zero to five degrees.
Girl opening refrigerator door, taking milk carton out, closing door, pouring milk [and taking a drink, if time]		And we don't want all that cold air leaking out. Select your items quickly, and then shut the door.
Dad putting last glass and plate in dishwasher, pushing air dry, and water saver buttons.		Always run the dishwasher with a full load, and use the air dry setting. Use the "water saver" feature if your dishwasher has one.

Video	Audio/Graphic Effects	Narration
Family playing on floor, cat walks in.	New music, maybe the relaxed happy music from the beginning?	Making smart energy choices helps you and your family. Your home can be more comfortable because of fewer drafts ...
Mom pushing "cool" button on washer.		... more hot water for other things when you use cold water for clothes washing ...
Dad vacuuming filter.		... and less dust particles when furnace filters are cleaned or replaced regularly.
Col. Bryant clip. Superimposed on beginning of clip: "Colonel George Bryant, Director of Public Works."		
Energy bandit with a "no" symbol superimposed (circle with line through it).	Character music	So remember the battle plan to eliminate the energy bandit.
Mom turning down thermostat		turn down the thermostat at night ...
Dad pulling out furnace filter and looking at it.		... clean or replace furnace filters monthly ...
Dad turning off porch light		... reduce unnecessary lighting ...
Mom shutting sliding glass door after son comes in.		... and keep doors and windows shut in cool weather.
"You Have the Power" icon (hand holding globe)		You have the power to make a difference!
Icon of light bulb with words superimposed: For more information, contact: Your Community Mayor Or Public Works Department, 967-2837.		For more information about making your home energy efficient and comfortable, contact your community mayor or the Public Works Department.
Credits Etc. Operation Energy Campaign, 1998		

# Appendix E

## Additional Resources

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**U.S. Department of Energy****Federal Energy Management Program (FEMP)**

FEMP Help Desk: 1-800-363-3732 (DOE-EREC)

FEMP Office: 202-586-5772

FEMP Fax: 202-586-3000

<http://www.eren.doe.gov/femp/femp.html>

Internet site includes an electronic order form for FEMP publications, including software, CDs, case studies, annual reports, posters, newsletter, and other materials

**DOE's Energy Efficiency and Renewable Energy Clearinghouse**

P.O. Box 3048

Merrifield, VA 22116

Phone: 1-800-363-3732

Fax: 703-893-0400

E-mail: [doe.erec@nciinc.com](mailto:doe.erec@nciinc.com)

<http://www.eren.doe.gov>

**U.S. Department of Defense**

Information and publications on the U.S. military, including family housing and energy efficiency initiatives

Internet site: DefenseLINK

<http://www.defenselink.mil/index.html>

**The Alliance to Save Energy**

A nonprofit coalition that promotes the efficient and clean use of energy worldwide. Offers free, energy-related lesson plans for educators and a "green schools" program. Offers an on-line, interactive, personalized "home energy checkup." Sponsors and conducts research.

1200 18th Street, NW

Suite 900

Washington, DC 20036

Phone: 202/857-0666

Fax: 202/331-9588

E-mail: [info@ase.org](mailto:info@ase.org)

<http://www.ase.org/>

**Home Energy Saver**

Internet tool that lets users enter their zip codes and, based on geographic area, suggests ways to improve energy efficiency in homes

Sponsored by the U.S. Environmental Protection Agency and the U.S. Department of Energy

<http://HomeEnergySaver.lbl.gov/>

**Washington State University****Energy Ideas Clearinghouse**

Will search for existing published energy-related materials by topic

1-800-872-3568

**Executive Order 13123**

Greening the Government through Efficient Energy Management

June 3, 1999

<http://www.eren.doe.gov/femp/aboutfemp/exec13123.html>



## **Appendix F**

### **Process for Accounting for Weather Effects in Energy-Use Data**

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A billing analysis comparison approach is the standard method for estimating energy savings from energy conservation programs. The utility billing approach estimates energy savings by establishing an energy consumption baseline or baseline model using 12 or more months of energy consumption (the energy source used for heating and cooling) for the housing area of interest. That baseline consumption is compared with actual consumption after implementation of the conservation project.

One limitation of a simple comparison of the monthly consumption, however, is that it does not account for other factors that can affect energy consumption and vary over time, such as weather. For example, we know that the amount of natural gas or electricity consumed for heating depends on the outside air temperature - the colder it is, the more heating required to maintain the same comfort level in the residence. So, if the outdoor temperatures in the winter months used to establish the energy use baseline were significantly colder than the months used to determine the actual energy use, the predicted energy use based on the baseline model would be significantly greater than actual energy use, artificially inflating the "real" energy savings derived from the project.

A multivariate regression analysis is one technique to account for the differences in weather conditions between the pre- and the post-project periods. The basic data requirements for this approach are housing community-level monthly natural gas consumption, the dates of the meter reading, and daily average outdoor air temperature representative of the site.

The baseline statistical model is constructed by regressing the daily energy consumption against the daily average temperature (or heating degree day) for the billing period to determine the baseline energy performance model. Once the appropriate baseline model has been determined for the housing project, the post-installation energy use is estimated by running the baseline model using post-project daily temperature and operating conditions as model input. The energy savings are calculated by comparing the differences between the actual energy use and the energy use predicted by the model for the same time period.

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The *Revised Handbook for Promoting Behavior-Based Energy Efficiency in Military Housing* is published in three parts:

*Revised Handbook for Promoting Behavior-Based Energy Efficiency in Military Housing, [Sections 1-4](#).*

*Revised Handbook for Promoting Behavior-Based Energy Efficiency in Military Housing, [Sections 5-7](#).*

*Revised Handbook for Promoting Behavior-Based Energy Efficiency in Military Housing, [Appendices](#).*